

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 4-8, 10, 16 and 18 are pending in the present application. By this Amendment claims 1 and 17 are canceled without prejudice, claims 4-8 and 16 are amended, and claim 18 is added. No new matter is involved.

In the Outstanding Office Action, the drawings and specification are objected to; claims 1, 4-8, 10, 16 and 17 stand rejected under 35 U.S.C. § 112, first paragraph and under 35 USC §112, second paragraph; claims 1, 4-8, 10, and 16-17 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Tepman et al. ("Tepman") or, alternatively, in view of Dubois et al. ("Dubois"); and claims 4 and 10 stand rejected under 35 U.S.C. § 103(a) as unpatentable over AAPA in view of Tepman. or, alternatively, in view of Dubois and Rempei Nakata.

Regarding the objection to the drawings and specification, Applicants have filed a substitute specification which is essentially the same as originally filed with the exception of correction of errors clear from the face of the specification, as filed, and Applicants have filed replacement drawing sheets returning the drawings to their original state, as filed.

Applicants respectfully submit that the drawing changes and the specification amendments remove any basis for objection to the specification and drawings. Accordingly, it is respectfully requested the objections to the drawings and specification be withdrawn.

With respect to the rejection of claims 1, 4-8, 10 and 16-17 under 35 USC §112, first paragraph for failing to comply with the written description requirement, this rejection is moot

because independent claim 1 has been canceled, and the language which serves as the basis for this rejection in claim 1 is not found in new independent claim 18.

With respect to the rejection of claims 1, 4-8, 10 and 16-17 under 35 USC §112, first paragraph for failing to particularly point out and distinctly claim the invention, this rejection is moot because independent claim 1 has been canceled, and the language in issue in this rejection is not found in new independent claim 18.

With respect to the rejection of claims 1, 4-8, 10, 16 and 17 under 35 USC §103(a) as being unpatentable over AAPA in view of U.S. Patent 5,589,224 to Tepman, this rejection is traversed for a number of reasons.

Initially, Applicants note that claim 1 has been canceled and the other claims under rejection now depend from independent claim 18. Accordingly, this rejection will be discussed in terms of new independent claim 18.

Claim 18 recites a vacuum deposition apparatus having a process chamber, comprising: a susceptor for heating a glass or quartz substrate, all four edges of the susceptor acting as a sliding portion on which to slide the glass or quartz substrate to a stopped position by stopping pins placed on the sliding portion, the susceptor having a raised perimeter portion structured to accommodate sliding of the glass substrate without incurring contact of the glass or quartz substrate with a build up of vacuum deposited material on the raised perimeter portion of the susceptor; for positioning the glass or quartz substrate into contact with the susceptor at a non-parallel angle to a top surface of the susceptor; and for permitting edges of the glass or quartz substrate to slide along a portion of the susceptor toward stopping pins until the glass or quartz substrate is substantially parallel with the susceptor; wherein the susceptor includes a groove

formed in all four edges of said raised perimeter portion at a location of the stopping pins to receive vacuum deposited material and thereby minimize formation by the vacuum deposited material of a film on the raised perimeter portion of the susceptor, and wherein a length of said raised perimeter portion, measured from said groove, to the recessed center portion of the susceptor is about 10 mm to minimize breakage of the glass or quartz substrate by preventing a severe bend of the glass or quartz substrate during transfer of the glass or quartz substrate to the susceptor.

Applicants disclosed conventional art susceptor does not include any groove and “the gap of the stopper pin 28 and a slide part where the glass substrate 4 is safely placed, is 5mm.” Applicants have recognized that the conventional art apparatus causes a “slide miss” such that the glass substrate 4 is broken due to a severe bend of the glass substrate.

Applicants’ claimed invention is directed to a vacuum deposition apparatus which minimizes the occurrence of slide misses and resulting broken glass substrates due to slide misses. The claimed invention includes not only a groove in which to receive vacuum deposited material that can accumulate on a susceptor, but also provides an improved raised perimeter slide portion of the susceptor, a feature which is neither disclosed nor suggested by the applied art.

While Tepman discloses a groove 520 which is used to permit additional buildup of deposited material relative to the planar configuration along the edge of substrate 14 without the material sticking to the substrate and without interfering with the positioning and orientation of the substrate on the pedestal 504, and shows centering pins 518 in the groove (col. 7, lines 36-51), Applicants cannot find any disclosure in Tepman of a slide area of a raised perimeter portion of a susceptor plate to minimize occurrence of glass substrate breakage due to severe bending of the

glass substrate.

Applicants also cannot find in Dubois, disclosure of a slide area of a raised perimeter portion of a susceptor plate to minimize occurrence of glass substrate breakage due to severe bending of the glass substrate. Dubois merely discloses providing a groove 44, one of the purposes of which is to receive deposition which would otherwise build up at the edge of a wafer (col. 4, lines 43-48).

Thus, even if one of ordinary skill in the art were properly motivated to modify Applicants' disclosed convention art in view of Tepman or Dubois, the so-modified version of applicants' disclosed convention art would still not meet, suggest, or otherwise render obvious the claimed invention.

The outstanding Office Action also relies on a statement by the Court in *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984) to the effect that, where the only difference between the prior art and the claims was a relative dimension of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device. However, that statement does not apply to the facts of this case, where the sliding dimension of the prior art results in broken substrates due to severe substrate bending, whereas the sliding dimension of the claimed invention minimizes broken substrates by providing enough room for substrate expansion without severe bending. Thus, the claimed invention clearly performs differently than does the applied art.

Accordingly, it is respectfully submitted that independent claim 18 and each of the claims depending therefrom are allowable.

Further, it is respectfully submitted the rejection of claims 4 and 10 under 35 U.S.C. § 103(a) noted in the Office Action has also been overcome as Rempei Nakata also does not teach or suggest the features recited in independent claim 18.

CONCLUSION

All objections and rejections raised in the Office Action having been addressed, it is respectfully submitted that the present application is in condition for allowance. Should there be any outstanding matters that need to be resolved, the Examiner is respectfully requested to contact Robert J. Webster (Reg. No. 46, 472) at 703-205-8000, to conduct an interview in an effort to expedite prosecution in connection with the present application.

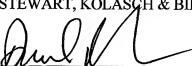
If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Date: May 25, 2010

Respectfully submitted,

BIRCH, STEWART, KOLASGH & BIRCH, LLP

By:



David A. Bilodeau
Reg. No.: 42,325
P.O. Box 747
Falls Church, Virginia 22040-0747
Telephone: (703) 205-8000
Attorney for Applicant

Attachments: Replacement Drawings
Substitute specification (clean copy and marked-up copy)